

REMARKS

Claims 14-24 and 29-33 remain in this application. Claims 14-16 and 29 are amended. Claims 25-28 have been canceled while the limitation of claim 25 has been added to claim 15, and the limitation of claim 26 has been added to claim 16. Remaining claims 17-24 and 30-33 are unchanged. No new subject matter has been added by this Amendment.

In Section 3 of the Office Action, the Examiner objects to the drawings under 37 C.F.R. §1.83(a), indicating that the feature of claim 22, in particular the "mutually abutting push links", is not illustrated in the drawings. Figure 8 has been added which illustrates these mutually abutting push links.

In Section 5 of the Office Action, the Examiner rejects claims 14-33 under 35 U.S.C. §112, second paragraph, as being indefinite. In particular, the Examiner questions the term "rotational symmetrical". This term has been changed to "symmetrical". Furthermore, the Examiner indicates that in claims 14 and 29, the first and second friction surfaces are on the cones and can include a radial component, while the specification states that the cones can be fixed radially. Claims 14 and 29 have been amended to specify a radial force component as opposed to a radial displacement component. Therefore, the cones, which are connected to the input shaft and the output shaft, may be fixed radially and still have force components that are axially and radially directed.

The Examiner also rejects claim 22, indicating the term "mutually abutting push links" is not shown in the drawings. Figure 8 has been added to show these links and the specification has been amended to add a description of Figure 8.

In Section 7 of the Office Action, the Examiner rejects claims 14-16, 19-22, and 24-31 under 35 U.S.C. §102(b) as being anticipated by German Patent No. DE 812618. The German patent is directed to a continuous variable transmission wherein fixed friction rings (d) are used. In particular, the text in the German patent, in the first column of page 2, lines 15-20, translates to state: "The transmission of the peripheral forces from the drive cone onto the driven cone is established by the inner friction part of which each consists of a friction ring (d), which is fixed onto a metal disk (e¹), of which each is provided with a hollow shaft (e)". These friction rings are not push belts. Push belts, by their nature, are flexible and compliant. Furthermore, the use of push belts provides for a better and more efficient force transmission. To use push belts, the friction surfaces should be convex with both axial and radial components in order to compress the push belt such that its contact area increases and adapts to the local radius of the friction surface. In particular, with attention directed to Figure 1 of the subject application, the friction disk 3 contacts the push belt 9 on the upper side of the drawing, while the push belt 9 contacts the rotatable body 7 at the bottom of the drawing. The upper part of the push belt adapts to the radius of the friction disk 3, while the lower part of the push belt also adapts to the radius of the rotatable body 7. Due to this simultaneous adaptation to both radii, a better and more efficient power transfer is achieved. The fixed friction rings (d) disclosed in the German patent are not capable of conforming in such a fashion.

As indicated in amended claim 14, the friction surfaces include at least an axial force component and at least one of the first friction surface and the third

friction surface and at least one of the second friction surface and the fourth friction surface include a radial directional force component. This feature is neither taught nor suggested by the German patent or the other prior art of record. The friction rings in the German patent provide only an axial force component and do not provide a radial force component which, as mentioned, improves transmission efficiency.

Furthermore, claim 15 has been amended to specify that the input shaft and the output shaft each include a wheel with a conical surface opening toward the body. The German patent, to the contrary, discloses a conical surface opening in the other direction which, while permitting an axial force component, does not permit a radial force component between the friction surfaces of the transmission. Additionally, claim 16 has been amended in a similar fashion to permit the existence of both the axial force component and radial force component. This feature is neither taught nor suggested by the German patent.

Claim 29 has been amended in a fashion similar to claim 14, and the same argument applied to claim 14 to distinguish over the teaching of the German patent also applies to claim 29.

Amended independent claims 14 and 29 are believed to be patentably distinct, and by way of their dependence upon these claims, dependent claims 15-24 and 30-33 are themselves believed to be patentably distinct.

In Section 10 of the Office Action, the Examiner has indicated that claims 17 and 18 would be allowable if rewritten to overcome the rejection under 35 U.S.C. §112, second paragraph. The Applicant notes that claims 17 and 18 define patentable subject matter, however, furthermore believes that claim 14 as amended

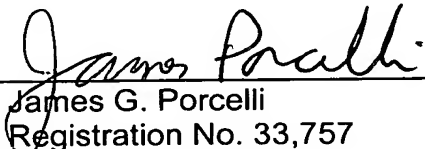
Appl. No. 10/088,126
Amdt. dated July 23, 2004
Reply to Office Action of February 23, 2004
Attorney Docket No. 702-020391

defines patentable subject matter having a broader scope of protection. The Applicant would like to reserve the right to include claims 17 and 18 as independent claims in the event that claim 14, as amended, is not allowed by the Examiner.

Reconsideration and allowance of pending claims 14-24 and 29-33 are respectfully requested.

Respectfully submitted,

WEBB ZIESENHEIM LOGSDON
ORKIN & HANSON, P.C.

By 
James G. Porcelli
Registration No. 33,757
Attorney for Applicant
700 Koppers Building
436 Seventh Avenue
Pittsburgh, Pennsylvania 15219-1818
Telephone: 412-471-8815
Facsimile: 412-471-4094